

Amendments to the Drawings:

The attached two (2) replacement drawing sheets include changes to Figures 3, 4, and 5. These two (2) attached sheets, which include Figs. 3, 4, and 5, replace the original sheets including Figs. 3, 4 and 5. In Figs. 3, 4 and 5, the signal labels have been amended to be consistent with the labels used in the specification.

Attachments: 2 replacement sheets

REMARKS

I. Introduction

Claim 14 has been canceled, without prejudice, and therefore claims 1-13 and 15-17 are currently pending. Applicants gratefully acknowledge the Examiner's indication that claims 7-13 contain allowable subject matter. Claim 7 has been rewritten in independent form to include the subject matter of base claim 1. Accordingly, claim 7 and its dependent claims 8-13 are now in allowable condition. Furthermore, in view of the foregoing amendments and the following remarks, it is respectfully submitted that all of the presently pending claims are in allowable condition.

II. Objection to the Drawings

The Examiner has objected to the drawings on the grounds that certain reference symbols are used interchangeably between the drawing and the specification. In response, replacement drawing sheets including amended Figures 3, 4 and 5 having symbols that match the symbols in the specification are submitted herewith.

III. Rejection of claim 14 under 35 U.S.C. § 101

Claim 14 has been rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter.

Without passing judgment on the merits of the rejection of claim 14 under 35 U.S.C. § 101, it is noted that claim 14 has been canceled, without prejudice, and thus the rejection is moot.

IV. Rejection of claims 1-6 and 35 U.S.C. § 102(e)

Claims 1-6 and 15-17¹ have been rejected under 35 U.S.C. § 102(e) as anticipated by U.S. Patent No. 6,619,268 to Rueger et al. ("Rueger").

To reject a claim under 35 U.S.C. §102(e), the Office must demonstrate that each and every claim feature is identically disclosed in a single prior art reference. See Scripps Clinic & Research Foundation v. Genentech, Inc., 18 U.S.P.Q.2d 1001, 1010 (Fed. Cir. 1991). The

¹ While the rejection initially states that only claims 1-6 are being rejected, it is assumed that the Examiner meant to include claims 15-17 in this rejection since claims 15-17 are later referred to in the body of the rejection.

identical invention must be shown in as complete detail as is contained in the claim. M.P.E.P. §2131.

Independent claim 1 recites a method for operating an internal combustion engine that includes generating a setpoint value for driving the piezo-actuator, determining a setpoint charge quantity from the setpoint value and determining an actual charge quantity supplied to the piezo-actuator; combining the setpoint charge quantity and the actual charge quantity to produce a combined result and then causing the combined result to act upon a drive circuit of the piezo-actuator. Rueger does not disclose each of these elements of claim 1.

The Rueger references describes a method in which, after a starting signal the charging of a piezo-actuator takes place, and a comparator (830) compares a voltage setpoint value stored in a memory (810) to a measured actual voltage value (700, 710, ...). (See Rueger, col.16, lines 40-45). The charging procedure is interrupted as soon as the actual voltage value reaches the voltage setpoint value. That is, the time duration of the charging process does not necessarily correspond to a predefined value, but may vary depending on the voltage curve.

Thus, in contrast to the claimed invention, in Rueger, *the charge itself is not determined and monitored*, but rather a voltage curve is determined. Although it may be possible, in principle, to convert voltage to charge at a known capacitance, such a conversion would encounter practical difficulties in the context of a piezo-actuator designed as an injector and situated in the area of the combustion chamber of the internal combustion engine. Because of the use of the piezo-actuator in such an environment, at certain points in time, the characteristic properties of the piezo-actuator, and particularly the capacitance, are not easy to determine, and therefore, only a very imprecise measure of the charge supplied can be ascertained from the voltage curve at the piezo-actuator. This being the case, a simple conversion of a voltage to a charge does not lead to a control in the manner of the claimed invention. Furthermore, since one skilled in the art in the art of driving piezo-actuators would be aware of these technical difficulties, he or she would not be motivated to undertake such a conversion of voltage into charge.

It is accordingly submitted that Rueger does not disclose (or even suggest) the subject matter of claim 1 and its dependent claims 2-6, as well as the subject matter of claims 15-17 (which recite features substantially similar to the features of claim 1).

Withdrawal of the anticipation rejection of claims 1-6 and 15-17 is therefore respectfully requested.

V. **Conclusion**

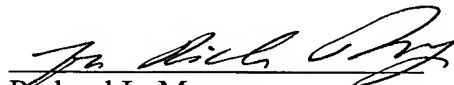
It is therefore respectfully submitted that all of the presently pending claims are allowable. All issues raised by the Examiner having been addressed, an early and favorable action on the merits is earnestly solicited.

Respectfully submitted,

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Dated: 5/19/05

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